Akihisa Terakita

List of Publications by Year
in descending order

62 papers	3,685 citations	147726 31 h-index	143943 57 g-index
65 all docs	65 docs citations	65 times ranked	2420 citing authors

#	Article	IF	Citations
1	The opsins. Genome Biology, 2005, 6, 213.	13.9	506
2	Cephalochordate Melanopsin: Evolutionary Linkage between Invertebrate Visual Cells and Vertebrate Photosensitive Retinal Ganglion Cells. Current Biology, 2005, 15, 1065-1069.	1.8	219
3	Shark genomes provide insights into elasmobranch evolution and the origin of vertebrates. Nature Ecology and Evolution, 2018, 2, 1761-1771.	3.4	197
4	A Novel Go-mediated Phototransduction Cascade in Scallop Visual Cells. Journal of Biological Chemistry, 1997, 272, 22979-22982.	1.6	158
5	Homologs of vertebrate Opn3 potentially serve as a light sensor in nonphotoreceptive tissue. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4998-5003.	3.3	147
6	Jellyfish vision starts with cAMP signaling mediated by opsin-G _s cascade. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15576-15580.	3.3	140
7	Counterion displacement in the molecular evolution of the rhodopsin family. Nature Structural and Molecular Biology, 2004, 11, 284-289.	3.6	138
8	Bistable UV pigment in the lamprey pineal. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 6687-6691.	3.3	136
9	Depth Perception from Image Defocus in a Jumping Spider. Science, 2012, 335, 469-471.	6.0	125
10	Diversity of animal opsin-based pigments and their optogenetic potential. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 710-716.	0.5	118
11	Parietal-Eye Phototransduction Components and Their Potential Evolutionary Implications. Science, 2006, 311, 1617-1621.	6.0	113
12	Amphioxus homologs of Go-coupled rhodopsin and peropsin having 11-cis - and all-trans -retinals as their chromophores. FEBS Letters, 2002, 531, 525-528.	1.3	105
13	Expression and comparative characterization of Gqâ€coupled invertebrate visual pigments and melanopsin. Journal of Neurochemistry, 2008, 105, 883-890.	2.1	90
14	Retinal-binding protein as a shuttle for retinal in the rhodopsin-retinochrome system of the squid visual cells. Vision Research, 1989, 29, 639-652.	0.7	86
15	Functional Properties of Opsins and their Contribution to Light-Sensing Physiology. Zoological Science, 2014, 31, 653-659.	0.3	81
16	Water and Peptide Backbone Structure in the Active Center of Bovine Rhodopsinâ€. Biochemistry, 1997, 36, 6164-6170.	1.2	74
17	Photochemical and Biochemical Properties of Chicken Blue-Sensitive Cone Visual Pigment. Biochemistry, 1997, 36, 12773-12779.	1.2	71
18	Distinct Roles of the Second and Third Cytoplasmic Loops of Bovine Rhodopsin in G Protein Activation. Journal of Biological Chemistry, 2000, 275, 34272-34279.	1.6	71

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19	Diversity and functional properties of bistable pigments. Photochemical and Photobiological Sciences, 2010, 9, 1435-1443.	1.6	71
20	Absorption Characteristics of Vertebrate Non-Visual Opsin, Opn3. PLoS ONE, 2016, 11, e0161215.	1.1	70
21	Functional Interaction between Bovine Rhodopsin and G Protein Transducin. Journal of Biological Chemistry, 2002, 277, 40-46.	1.6	61
22	Identification and characterization of a protostome homologue of peropsin from a jumping spider. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 51-59.	0.7	57
23	Presence of Two Rhodopsin Intermediates Responsible for Transducin Activationâ€. Biochemistry, 1997, 36, 14173-14180.	1.2	55
24	The Magnitude of the Light-induced Conformational Change in Different Rhodopsins Correlates with Their Ability to Activate G Proteins. Journal of Biological Chemistry, 2009, 284, 20676-20683.	1.6	52
25	A rhodopsin exhibiting binding ability to agonist all-trans-retinal. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6303-6308.	3.3	51
26	Crystal structure of jumping spider rhodopsin-1 as a light sensitive GPCR. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14547-14556.	3.3	48
27	Expression of UV-Sensitive Parapinopsin in the Iguana Parietal Eyes and Its Implication in UV-Sensitivity in Vertebrate Pineal-Related Organs. PLoS ONE, 2012, 7, e39003.	1.1	47
28	Evolution and diversity of opsins. Environmental Sciences Europe, 2012, 1, 104-111.	2.6	42
29	Chimeric Nature of Pinopsin between Rod and Cone Visual Pigmentsâ€. Biochemistry, 1999, 38, 14738-14745.	1.2	41
30	Structural Changes in the Schiff Base Region of Squid Rhodopsin upon Photoisomerization Studied by Low-Temperature FTIR Spectroscopyâ€. Biochemistry, 2006, 45, 2845-2851.	1.2	38
31	Diversification of non-visual photopigment parapinopsin in spectral sensitivity for diverse pineal functions. BMC Biology, 2015, 13, 73.	1.7	38
32	Activation of Transducin by Bistable Pigment Parapinopsin in the Pineal Organ of Lower Vertebrates. PLoS ONE, 2015, 10, e0141280.	1.1	34
33	An all-trans-retinal-binding opsin peropsin as a potential dark-active and light-inactivated G protein-coupled receptor. Scientific Reports, 2018, 8, 3535.	1.6	34
34	The counterionâ€"retinylidene Schiff base interaction of an invertebrate rhodopsin rearranges upon light activation. Communications Biology, 2019, 2, 180.	2.0	31
35	Demonstration of a rhodopsin-retinochrome system in the stalk eye of a marine gastropod,onchidium, by immunohistochemistry. Journal of Comparative Neurology, 2001, 433, 380-389.	0.9	30
36	Selective activation of G-protein subtypes by vertebrate and invertebrate rhodopsins. FEBS Letters, 1998, 439, 110-114.	1.3	27

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37	Identification of a new intermediate state that binds but not activates transducin in the bleaching process of bovine rhodopsin. FEBS Letters, 1998, 425, 126-130.	1.3	23
38	Color opponency with a single kind of bistable opsin in the zebrafish pineal organ. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11310-11315.	3.3	23
39	Immunohistochemical characterization of a parapinopsin-containing photoreceptor cell involved in the ultraviolet/green discrimination in the pineal organ of the river lamprey <i>Lethenteron japonicum</i>. Journal of Experimental Biology, 2007, 210, 3821-3829.	0.8	22
40	Retinal Attachment Instability Is Diversified among Mammalian Melanopsins. Journal of Biological Chemistry, 2015, 290, 27176-27187.	1.6	21
41	Beta-Arrestin Functionally Regulates the Non-Bleaching Pigment Parapinopsin in Lamprey Pineal. PLoS ONE, 2011, 6, e16402.	1.1	20
42	Spectral tuning mediated by helix III in butterfly long wavelength-sensitive visual opsins revealed by heterologous action spectroscopy. Zoological Letters, 2019, 5, 35.	0.7	20
43	Photochemical Nature of Parietopsin. Biochemistry, 2012, 51, 1933-1941.	1.2	19
44	Convergent evolution of tertiary structure in rhodopsin visual proteins from vertebrates and box jellyfish. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6201-6206.	3.3	19
45	Distribution of Mammalian-Like Melanopsin in Cyclostome Retinas Exhibiting a Different Extent of Visual Functions. PLoS ONE, 2014, 9, e108209.	1.1	19
46	The Two-Photon Reversible Reaction of the Bistable Jumping Spider Rhodopsin-1. Biophysical Journal, 2019, 116, 1248-1258.	0.2	18
47	Probing for the Threshold Energy for Visual Transduction: Red-Shifted Visual Pigment Analogs from 3-Methoxy-3-Dehydroretinal and Related Compounds. Photochemistry and Photobiology, 1999, 70, 111-115.	1.3	15
48	From extraocular photoreception to pigment movement regulation: a new control mechanism of the lanternshark luminescence. Scientific Reports, 2020, 10, 10195.	1.6	13
49	Intramolecular Interactions That Induce Helical Rearrangement upon Rhodopsin Activation. Journal of Biological Chemistry, 2014, 289, 13792-13800.	1.6	11
50	Optogenetic Potentials of Diverse Animal Opsins: Parapinopsin, Peropsin, LWS Bistable Opsin. Advances in Experimental Medicine and Biology, 2021, 1293, 141-151.	0.8	10
51	The non-visual opsins expressed in deep brain neurons projecting to the retina in lampreys. Scientific Reports, 2020, 10, 9669.	1.6	8
52	Functional identification of an opsin kinase underlying inactivation of the pineal bistable opsin parapinopsin in zebrafish. Zoological Letters, 2021, 7, 1.	0.7	6
53	Mapping of the local environmental changes in proteins by cysteine scanning. Biophysics (Nagoya-shi,) Tj ETQq1 1 0.784314 rgBT /Ov	0.4	5
54	Insights into the evolutionary origin of the pineal color discrimination mechanism from the river lamprey. BMC Biology, 2021, 19, 188.	1.7	5

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55	Letter to the editor. Visual Neuroscience, 2020, 37, E009.	0.5	2
56	Molecular Architecture of Rhodopsin and Its Diversification. Seibutsu Butsuri, 2005, 45, 302-307.	0.0	2
57	Contribution of a visual pigment absorption spectrum to a visual function: depth perception in a jumping spider. Biophysics (Nagoya-shi, Japan), 2013, 9, 85-89.	0.4	1
58	1P-272 Photoreaction of parietopsin(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S64.	0.0	0
59	1P-275 Comparative study on active state structures of rhodopsins having functionally varied properties using site-directed fluorescence labeling(The 46th Annual Meeting of the Biophysical) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.0	0
60	1P-273 Analysis of the regions in the C-terminus of G protein alpha subunit controlling the binding and activation efficiency by rhodopsin(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S64.	0.0	0
61	1P-276 Comparative studies of the photoreactions of all-trans-retinal-containing opsins, peropsin and retinochrome(The 46th Annual Meeting of the Biophysical Society of Japan). Seibutsu Butsuri, 2008, 48, S65.	0.0	0
62	3P275 Investigation on a relationship of spectral characteristics of the rhodopsins and depth perception mechanism in a jumping spider(Photobiology: Vision & Photoreception,The 48th Annual) Tj ETQq0 0 0 rgBT /Overlock 1	0.0	0